

AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior versions and listings of claims in this application. Please cancel claims 4 and 13 without prejudice or disclaimer.

Listing of Claims:

1. (Currently Amended) A process for producing foam beads from thermoplastic polymers, ~~encompassing consisting of~~ the stages of

- a) addition of a blowing agent to a thermoplastic polymer melt,
- b) cooling and extrusion, through a die, of the thermoplastic polymer melt

~~comprising containing~~ blowing agent,

c) cutting of the thermoplastic polymer melt ~~comprising containing~~ blowing agent downstream of the die at reduced pressure with foaming to give foam beads;

~~which comprises using a blowing agent in which water and a solubilizer are present, wherein the foam beads have with a bulk density in the range from 15 to 25 kg/m³ and wherein the solubilizer used comprises an aliphatic alcohol, ketone, ether, or ester and wherein characterized in that the blowing agent used comprises consists of~~ a mixture of

from 0.1 to 3% by weight of water,

from 0.1 to 3% by weight of an aliphatic alcohol, ketone, ether, or ester ~~as solubilizer~~,

and

from 1 to 10% by weight of an aliphatic, halogenated, or halogen-free hydrocarbon, N₂, or C₂H₂-CO₂, based on the thermoplastic polymer, ~~and~~

wherein the thermoplastic polymer has a bi- or multimodal molecular weight distribution, and the thermoplastic polymer ~~comprises consists of~~ a polymer with a molar mass M_w in the range from 150,000 to 250,000 g/mol and a polymer with a molar mass in the range from 280,000 to 500,000 g/mol.

2. (Canceled)

3. (Previously Presented) A process as claimed in claim 1, further comprising an adsorbent wherein the absorbent used comprises aluminum hydroxide, phyllosilicate, or zeolite.

4-5. (Canceled)

6. (Previously Presented) A process as claimed in claim 1, wherein the thermoplastic polymer used comprises polystyrene, styrene copolymers, polyethylene, polypropylene, or a mixture of these.

7. (Canceled)

8. (Previously Presented) A process as claimed in claim 1, wherein the thermoplastic polymer used comprises polystyrene with a polydispersity M_w/M_n of at least 2.5.

9. (Previously Presented) A process as claimed in claim 1, wherein, prior to or after addition of the blowing agent, an IR absorber is added to the thermoplastic polymer melt.

10. (Original) A process as claimed in claim 9, wherein the IR absorber used comprises from 0.1 to 2.5% by weight based on the thermoplastic polymer melt, of graphite, carbon black, or aluminum powder.

11-14. (Canceled)

15. (Previously Presented) A process as claimed in claim 3, wherein the thermoplastic polymer used comprises polystyrene, styrene copolymers, polyethylene, polypropylene, or a mixture of these.

16-22. (Canceled)